

What is claimed is:

1. A piezoelectric motor operating, by vibration of a vibrating body having a piezoelectric element, a contact member or the vibrating body itself, comprising:

a support member which engages with the vibrating body in the vicinity of a position of node of vibration excited by the vibrating body, and which supports the vibrating body while regulating a motion of the vibrating body in a direction other than a contact direction between the vibrating body and the contact member,

a contact member contacting with the vibrating body or a friction member provided in the vibrating body, and

a pressurization means for pressurizing between the vibrating body and the contact member.

2. A piezoelectric motor according to claim 1, further comprising plural concave portions provided in the vibrating body, and a support member having plural convex portions engaging with the concave portions.

3. A piezoelectric motor according to claim 1, further comprising plural convex portions provided in the vibrating body, and a support member having plural concave portions engaging with the convex portions.

4. A piezoelectric motor according to claim 1, wherein the friction member has a portion extended from the vibrating body.

5. A piezoelectric motor according to claim 1, wherein it comprises a support member provided in the vibrating body and extending in a contact direction between the vibrating body and the contact member, and a guide member guiding the support member, and a motion in a direction other than a contact direction between a friction member provided in the vibrating body and the contact member is regulated by the support member and the guide member.

6. A piezoelectric motor according to claim 1, wherein it comprises a support member provided in the vibrating body and extending in a contact direction between the vibrating body and the contact member, a guide member guiding the support member, and a spring member applying a contact pressure between the vibrating body and the contact member,

the friction member provided in the vibrating body and the contact member are guided by the support member and the guide member so as to be movable in a contact direction, and

a rotation of the vibrating body about the support member is constrained by the spring member and a spring guide portion engaging with the spring member.

7. A piezoelectric motor according to claim 1, wherein it comprises a guide portion provided in the vibrating body, and a support member having an engagement portion engaging with the guide member, and a contact pressure between the vibrating body or a friction member provided in the vibrating body and

the contact member is obtained by applying a pressurization force to the support member.

8. A piezoelectric motor according to claim 7, wherein the guide portion is provided in the vicinity of a position of node of vibration excited by the vibrating body.

9. A piezoelectric motor according to claim 1, wherein a contact pressure between the friction member and the contact member is obtained by pressurizing an extending portion provided in the vibrating body by means of the support member, the extending portion engages with the support member and performs a rotation with a center line of the extending portion being made a rotation center, and an engagement portion between the extending portion and the support member has a shape regulating an operation other than the rotation operation.

10. A piezoelectric motor according to claim 1, wherein a pressurization applying a contact pressure between the friction member and the contact member acts on plural points in a width direction of the vibrating body, and a shape of the friction member is one at least having a curved line toward the width direction of the vibrating body.

11. A piezoelectric motor according to claim 1, wherein it is the piezoelectric motor operating a movable body that is the contact member, the vibrating body is supported so as to be rotatable by a rotation shaft provided in the vibrating body, and a contact pressure is applied to the vibrating body

and the movable body by a pressurization force from a spring member.

12. A piezoelectric motor according to claim 11, wherein the pressurization force from the spring member acts to the vicinity of the position of node of vibration exited by the vibrating body.

13. A piezoelectric motor according to claim 11, wherein the pressurization force from the spring member acts as a torque of the rotation shaft.

14. An electronic equipment with piezoelectric motor according to claim 1, further comprising a transmission mechanism operating monolithically with a movable body, and an output mechanism operating on the basis of an operation of the transmission mechanism.

15. An electronic equipment with piezoelectric motor according to claim 7, further comprising a transmission mechanism operating monolithically with a movable body, and an output mechanism operating on the basis of an operation of the transmission mechanism.

16. An electronic equipment with piezoelectric motor according to claim 11, further comprising a transmission mechanism operating monolithically with a movable body, and an output mechanism operating on the basis of an operation of the transmission mechanism.

17. A stage having the piezoelectric motor according to

claim 1, further comprising a transmission mechanism operating monolithically with a movable body, and an output mechanism operated on the basis of an operation of the transmission mechanism.

18. A stage having the piezoelectric motor according to claim 7, further comprising a transmission mechanism operating monolithically with a movable body, and an output mechanism operated on the basis of an operation of the transmission mechanism.

19. A stage having the piezoelectric motor according to claim 11, further comprising a transmission mechanism operating monolithically with a movable body, and an output mechanism operated on the basis of an operation of the transmission mechanism.